COLUMBIA RIVER REGIONAL FORUM

TECHNICAL MANAGEMENT TEAM
MEETING NOTES
July 3, 2001
CORPS OF ENGINEERS NORTHWESTERN DIVISION OFFICES – CUSTOM HOUSE
PORTLAND, OREGON

TMT Internet Homepage: http://www.nwd-wc.usace.army.mil/TMT/index.html

FACILITATOR'S NOTES ON FUTURE ACTIONS

Facilitator: Richard Forester

The following notes are a summary of issues that are intended to point out future actions or issues that may need further discussion at upcoming meetings. These notes are not intended to be the "record" of the meeting, only a reminder for TMT members.

Dworshak Operations:

Results of Dworshak operation discussion at June 28 IT meeting was made by Paul Wagner, NMFS. Wagner reported that while the concerns raised by Idaho and the Nez Perce Tribe regarding SOR 2001-7 were recognized, the decision was not to delay the operation by a week as requested and move forward with the SOR. The decision was based water temperature modeling, delay in impact at LWG caused by low water levels, and known benefits to Snake and Clearwater River fish. The COE began this operation July 2; however, there could be transmission constraints (see immediately below).

John Anasis (BPA Transmission group) informed TMT of the limitation created by the constrained path on the west of Hatwai cut plane in Washington. The west of Hatwai path integrates transmission of electricity coming into the NW from public and private sources in Montana, Idaho Panhandle, Libby, Hungry Horse, Dworshak, and Albeni Falls. Under FERC open access rules, the grid has to be open to all those who want to use it, with the usage constrained on a pro-rata basis. BPA tries to manage the constraint on a pre-schedule basis. With the closure of aluminum plants and other measures there are load reductions which may result in an excess of generation trying to pass through the transmission pathway. The load and generation have to balance to prevent overload. Release of 10 kcfs at Dworshak produces 450 MW of energy, which may overload the pathway at times during light load hours. The only other flexibility, in light of the BiOp, may be to reduce the flow at Hungry Horse to .5 kcfs (see operation discussion below). As a result operations at Dworshak will have to be monitored on an hour-to-hour basis, with evenings and Sundays causing greater problems because these are light load hours. Dworshak has the operational flexibility to quickly adjust its operations. During light load hours the SOR 2001-7 requested discharges may not be released. It was not anticipated that releases would fall below 7 kcfs, and it was anticipated that for the next two weeks, the release levels may typically fall 1 kcfs short of the SOR 2001-7 during light load periods. The discussion will continue at the next conference call meeting; John will be available next week as well.

Summer Spill:
The report on the Regional Executives meeting last Friday summarized the decision not to provide summer spill at this time. Some of the alternatives to spill discussed at that meeting may be referred to TMT for elaboration and implementation.

Water Temperature Modeling Results:
Paul Wagner discussed the handout of NMFS and CRITFC model runs conducted by John Yearsley. John gave a preliminary analysis and reminded the group that the model is conservative. Dick Cassidy also warned the group to use caution when relying on these models for prediction purposes. The models are good at showing relative magnitude of differences and less certain in making precise predictions. Kyle Martin reminded everyone that 1998 used in the meteorological part of the model was a hot and dry summer whereas the forecast for this summer is moderate to warm. Paul Wagner also reminded everyone that the model run dates were end of the week, not beginning of the week. Finally, it was clarified that the LWG temperatures were tailrace and not forebay, and those were usually cooler. The model runs can be found on the website: www.epa.gov/r10earth/columbiamainstemtmdl.htm

Review Current System Conditions:
Rudd Turner and Pat McGrane reported on reservoir operations. Pat said that they began 1.5 kcfs discharge at Hungry Horse July 2 and proposed reducing it to .5 kcfs to help mitigate the Hatwai cutplane transmission constraint. Scott Bettin reported that they are still operating in a power emergency and no summer spill will be provided. Paul Wagner reported on fish migration, saying that many subyearling chinook were seen at McNary, most of which were hatchery fish. Billy Connor summarized his paper on juvenile Snake River fall chinook at Lower Granite. He observed that a great amount of Clearwater fish are in the reservoir.
ACTION: On behalf of TMT, Rudd will ask RFC for a July Final water supply forecast. He will also find out why the final water supply forecast was approximately 2 MAF lower than the previous forecast.

Update on Fish Run Indices Adjusted for Spill at Bonneville:
Chris Ross reported on the handout, which can be found on the Fish Passage Center website. NMFS adjusted the graph and put changes on the website.

SOR 2001-8:
The Salmon Managers requested a continuation of 10 kcfs release at Dworshak as long as no summer spill is provided. They requested to maintain temperature regulation at 48 degrees F. This operation would begin July 9. Christine Mallette also introduced a separate SOR 2001-ODFW-01 from Oregon. This request is the same as SOR 2001-8, but it calls for operations to continue at least until August 31. The COE voiced concerns with operating for more than two weeks at a time. The issue of dropping Dworshak below 1520' may also have to be resolved in the future and Nez Perce consulted on their specific cultural resources concerns with Dworshak below 1520'.

ACTION: TMT will continue to release Dworshak at 10 kcfs for two weeks and continue

discussions on a two-week basis. Two caveats exist regarding this operation. Transmission problems and/or powerhouse capacity may drop the release at times. Any drops can be monitored on the website.

Develop Recommended Operations:
Dworshak will continue ramping up, on July 5 & 7, and reach 10 kcfs July 9 then hold for two weeks, with caveats noted in the above discussions. Libby remains at 6 kcfs while Hungry Horse will reduce to .5 kcfs on Saturday, July 7, with more discussion at the next meeting. Chris Ross summarized a peer review paper referred to during IT discussion which showed that the SOR 2001-7 augmentation balances the needs or the Snake and Clearwater fish. He distributed a graph of the research done on augmentation at Dworshak and effects on Fall chinook. He said optimum growth rates are around 62 F.
ACTION: Reduce Hungry Horse flows to .5 kcfs on Saturday, July 7 and track it on TMT's future agendas.

Finalize Water Management Plan:
Paul Wagner's edits were discussed and Water Management Plan finalized, except the Appendix 2, relating to the Emergency Protocols. Christine Mallette requested more discussion on emergency protocols at the next face-to-face meeting. The final version will be edited for typos and minor grammar and tense errors.

Emergency Procedures:
Cindy Henriksen is developing an emergency team list. Any member who is interested in being on the list should give her a phone number, which she'll print on business cards and circulate to everyone on the list.

Next Meeting July 11 Conference Call 9-12:
Agenda items:
- Update on Dworshak regarding the west of Hatwai transmission issue
- Update on Hungry Horse

Meeting Minutes

1. Greeting and Introductions

The July 3 Technical Management Team conference call, held at the Customs House in Portland, Oregon, was chaired by Cindy Henriksen of the Corps and facilitated by Richard Forester. The following is a distillation, not a verbatim transcript, of items discussed at the meeting and actions taken. Anyone with questions or comments about these minutes should call Henriksen at 503/808-3945.

Forester welcomed everyone to the meeting, then led a round of introductions and a

review of the agenda.

2. Results of Dworshak Operation Discussion at June 28 IT Meeting.

Paul Wagner reminded the group that the TMT was unable to reach a decision about Dworshak operations in response to SOR 2001-7 at last week's meeting. Idaho and the tribes objected to this SOR, and asked the IT to consider the question of whether implementation of this SOR should be delayed until July 8. At a conference call on June 28, the IT elected not to delay the implementation of SOR 2001-7, said Wagner, so flow augmentation from Dworshak began on July 2 as requested.

Henriksen reminded the TMT of Cathy Hlebechuk's report at last week's TMT meeting about the West of Hatwai transmission system problem; we thought that by scheduling changes in generation in advance, that would take care of that concern, but my understanding is that there is still some concern at Bonneville's Transmission Business Line (TBL) about the increased generation at Dworshak, and the status of the cut plane, Henriksen said.

John Anasis of BPA-TBL explained that West of Hatway refers to a section of the transmission system that slices through eastern Washington. The bulk of that path consists of federally-owned transmission facilities, he said; other facilities are owned by Avista. This transmission path integrates all of the generation coming into the Northwest from the Colstrip steam plants and other resources in Montana, from the Idaho panhandle, from Libby, Hungry Horse, Dworshak and Albeni Falls Dams, and from various Canadian projects as well.

This pathway was identified as a potential bottleneck in the transmission system as early as 1990, Anasis said; BPA and Avista have developed procedures and implemented system improvements to mitigate those potential overload issues.

More recently, however, Anasis said, the closure of the DSI load at Columbia Falls Aluminum and the Kaiser Aluminum plant in Spokane has caused local loads to fall dramatically. As a result, there is a lot of generation that is trying to move west through that pathway, which is leading to some overload problems, Anasis explained – in other words, without that DSI load, there is less local load to absorb the excess generation.

Prior to this point, when loads were higher, things were more manageable, Anasis said. We're discussing, with the owners of Colstrip, a generation dropping scheme which would remove some of their output from the grid if certain operating conditions occur, he said. Other generation dropping schemes are in place at Dworshak and Libby, and BPA is working on additional agreements with other resource owners on that portion of the grid.

The other thing to keep in mind is that TBL has to operate under the new FERC open access rules and requirements, Anasis said, which means we are required to provide comparable and open service to everyone who wants to use the transmission grid. That requires us to curtail usage of the path among all of our firm customers on a *pro rata* basis, he explained. To the extent that the sum of the generation at Libby, Hungry Horse, Dworshak and Albeni Falls has to

be curtailed, it will need to be prorated among all of the firm customers of the path – in other words, those reductions in transmission system capacity need to be shared evenly, Anasis said.

A slightly different scheduling paradigm is under consideration, which would allow all of our customers to pre-schedule the capacity they need, Anasis said; we would then make whatever adjustments are needed to keep the transmission system within the limits defined by our transfer capability.

We're talking about increasing discharge from 7 Kcfs to 10 Kcfs at Dworshak, said Scott Bettin – my understanding is that this could cause problems during the evening light-load hours. We're forecasting that we may encounter difficulties when generation at the four federal projects (Dworshak, Libby, Hungry Horse and Albeni Falls) exceeds 530 MW during light-load hours and 600 MW during heavy-load hours, Anasis replied. When that occurs, those four projects may then be subject to a pro-rata curtailment. We are now approaching those levels of generation, he said, so we may be looking at some degree of load reduction at Dworshak and elsewhere during certain light-load hours.

Is this going to be an ongoing issue? Wagner asked. Essentially, yes, Bettin replied, if we don't have non-firm transmission available during certain hours. In other words, he said, there is a chance that Dworshak outflow could surge depending on the need for hourly load curtailments. Steve Pettit raised the concern that raising and lowering Dworshak discharge could cause juvenile stranding in the Clearwater River downstream of that project.

In response to a question from Pat McGrane, Anasis said this is likely to be a problem for some time, until transmission system improvements can be made. The situation will be eased if we can get some of the generation curtailment agreements I discussed earlier in place, he said; also, as weather cools and loads pick up this fall, the situation will improve. In response to another question, Anasis said it is likely to be 2004, at the earliest, before a new 500 MW transmission line can be constructed to serve the West of Hatwai area. It's certainly one of the top high-priority projects BPA wants to get moving on, he said. It might also help if we could get the Columbia Falls aluminum plant back up and running, Pat McGrane suggested. In response to another question, Anasis said the load curtailment negotiations should eventually yield an additional 400-600 MW in transmission capacity, which will ease the bottleneck considerably.

The bottom line is that it looks as though we can maintain 7 Kcfs from Dworshak with no problem, Bettin said; however, once we go to 10 Kcfs outflow on July 7, during light-load hours, we may have to curtail Dworshak outflow by 1 Kcfs or so unless we can purchase non-firm transmission capacity during those hours.

Basically, we just wanted the TMT to be aware of this problem, and the fact that it might be necessary to drop generation and outflow at Dworshak during light-load hours, at least until the generation curtailment agreements are in place some time in the next two weeks, Bettin said. That begs the question of why you didn't see this coming, Henriksen said. No one anticipated or modeled the fact that the two aluminum plants with their combined load of 700 MW, would suddenly go off-line, Bettin replied. In response to a question from Christine Mallette, Bettin

said it may be possible to drop generation at the other three federal projects, although there are some challenges involved there. McGrane said Reclamation would not oppose reducing Hungry Horse discharge to 500 cfs, down from its current level of 1 Kcfs.

My suggestion is that we try this until next Wednesday, Bettin said. We will bring Dworshak outflow up to 10 Kcfs on Saturday, use non-firm transmission capacity when available, and just see how we do, he said. I think we can get by until the next TMT meeting, using non-firm transmission, he said. In response to a question, Anasis said that, in his opinion, there is a 50-50 chance that a portion of the Dworshak load may need to be curtailed over the next week, probably on the order of 1 Kcfs if no non-firm transmission capacity is available during light-load hours.

After a few minutes of additional discussion, Anasis agreed to participate in next week's TMT meeting to provide an update on this issue.

3. Results of Summer Spill Operation Discussion at June 29 Regional Executives Meeting.

Forester said the Regional Executives decided that there will be no summer spill program this year. At last Friday's Regional Executives meeting, CRITFC urged BPA to spend the $30 million necessary to provide some spill, Forester said; BPA replied that, from a system reliability standpoint, spill is simply not a feasible alternative this summer. The Regional Executives agreed, and at least for the time being, there will be no summer spill. No further Regional Executives meetings have been scheduled at this time, Forester added.

4. Water Temperature Modeling Results.

Wagner distributed a handout showing the results of EPA model runs evaluating the temperature effects of different outflow regimes at Dworshak during the remainder of the summer period. The first, Dworshak 1, would increase Dworshak outflow to 14 Kcfs for three weeks, then go to 10 Kcfs for another three weeks, then ramp outflow down to 6 Kcfs until project elevation reaches 1520 feet. Under Scenario 2, Dworshak would release 10 Kcfs straight across the season, beginning the week of July 8. Under Dworshak 3, designed by CRITFC, Dworshak would begin by releasing at 5.5 Kcfs, and would then ramp up to 10 Kcfs by mid-July. Under Dworshak 4, the second CRITFC scenario, Dworshak outflow would ramp up to 11 Kcfs by mid-August.

The bottom line, said Wagner, is that given anticipated flow and meteorological conditions this year, there is as much as a 5-degree C difference between these scenarios. Essentially, what the EPA model said is that the higher the output from Dworshak earlier in the season, the lower the water temperatures early in the season – 17 degrees C under Dworshak 1 vs. 22 degrees C for Dworshak 4.

The group discussed some of the assumptions used in these model runs, with Kyle Martin arguing that the weather this summer is likely to be cooler than the 1998 meteorology assumed in the model. Soscia and John Yearsley then discussed the background and basic structure of the

EPA temperature model; Yearsley went through each of the four runs in some detail, noting that, as Wagner said, releasing Dworshak storage early resulted in lower water temperatures earlier in the season; releasing Dworshak water later resulted in lower water temperatures later. As was mentioned at the Lewiston meeting, Yearsley said, Dworshak 2 resulted in the fewest days in exceedence of the 20-degree C temperature threshold at Lower Granite – 15 days vs. 22 days for Dworshak 1 an 24 days for both Dworshak 3 and 4.

So far, we have had only one day in excess of the 20-degree temperature standard, as measured at the forebay monitoring station, said Wagner – exactly what the model had predicted.

Dick Cassidy noted that the Corps has also been doing model runs using the MASS-1 model, using similar scenarios to the ones run through the EPA model. He made the point that these are comparative studies, not predictions of what is actually going to happen in the river this year. They are intended for use as a guide to operational decision-making, he said, but they are not forecast models – we don't know what the meteorology, for example, is going to be this year. They simply give us a sense of the comparative magnitude of difference between the various scenarios, he said.

Henriksen added that both the MASS 1 and EPA water temperature models show the same thing – that Dworshak 2, which runs a straight 10 Kcfs from Dworshak through the summer, significantly reduces Lower Granite water temperatures, when compared to the other scenarios, and also results in the lowest number of days in exceedence of the 20-degree standard.

Rudd Turner said that, if water temperatures are well under 20 degrees C at Lower Granite in mid-August, as both models show under scenario Dworshak 2, there may be an opportunity to reduce Dworshak outflow somewhat and conserve some cool Dworshak water for use in late August and early September. It was agreed that this may be a possibility.

Soscia noted that all of the EPA model results, including those from last year, are available at the following internet homepage:
www.epa.gov/r10earth/columbiamainstemtmdl.htm.

5. Current System Conditions.

Rudd Turner reported that the system has now transitioned into summer operations, and is being operated to meet power system needs. SOR 2001-7 is being implemented; Libby went to 6 Kcfs outflow on July 2 to supply bull trout flows. Dworshak reached 1587.4 feet as of midnight on June 30; Libby, elevation 2431.1 feet, 8 feet below the target elevation in the Federal 2001 Operations Plan. Albeni Falls was at elevation 2062.1 feet as of midnight June 30. Turner said the spring seasonal average flow at McNary was 123.9 Kcfs for the period of April 10-June 30; at Lower Granite it was 47.5 Kcfs for the period of April 3-June 20; and at Priest Rapids, for the period of April 10-June 30, seasonal average flow was 76.7 Kcfs. Turner added that current day-average Columbia River flows at Bonneville are about 130 Kcfs during the week and about 100 Kcfs during the weekend.

Cassidy added that he had provided a sheet of water temperature information (average daily temperatures) at various projects in the system over the past week. He noted that, in general, water temperatures are on the increase throughout the system.

McGrane said current Hungry Horse elevation is 3542 feet, up 1.5 feet since last week. Discharge went from 500 cfs to 1 Kcfs on July 2; we need to know whether that water is going to be released from Flathead Lake before we bump it up to 1.5 Kcfs, he said. Grand Coulee is now at elevation 1281 feet, down 1 foot from last week.

Bettin said there is no change in the status of the power system. The July early-bird water supply forecast was issued last Thursday, said Turner; it included a January-July runoff volume forecast of 53.9 MAF at The Dalles, which is close to the lowest water supply on record. The forecast for the other basins generally fell slightly or held steady.

Martin asked why the forecast for The Dalles would have fallen, given the fact that June precipitation in the Mid- and Upper Columbia basins was 150%-200% of normal. It was agreed to ask the River Forecast Center to explain this apparent discrepancy; Turner said he will try to provide that information at next week's TMT meeting.

Wagner went briefly through the current status of the fish migration; we're seeing tremendous numbers of subyearling chinook at McNary, currently, he said. The peak of 22,000 occurred about 10 days ago at Lower Granite; indices have since fallen to about 10,000 fish per day at that project. The cumulative indices show that we're at about the 30% passage point, currently, at McNary, Wagner said; according to project personnel, the vast majority of the subyearlings that have passed McNary to date have been hatchery fish, and the wild run from the Mid-Columbia has yet to begin in earnest. Adult passage continues at a rate of 1,200 chinook per day at Bonneville, which is amazing, for this point in the season, Wagner added.

Billy Connor noted that his in-season update has now been posted on the TMT website; he agreed that the majority of the subyearlings that have passed both Lower Granite and McNary so far are hatchery fish. The vast majority of the wild Snake River subyearlings are still in Lower Granite Reservoir, he said; I would guess that most of the Clearwater subyearlings are still in the river or in Lower Granite Reservoir, Connor said. Are you still predicting mid-July as the midpoint of the subyearling migration at Lower Granite? Chris Ross asked. Yes, Connor replied.

Ross noted that, at a previous TMT meeting, an issue arose regarding the fish guidance efficiency assumptions FPC had used to develop its cumulative yearling chinook passage indices at Bonneville; he said the Fish Passage Center has now updated their graphs as you see here, and provided a memo with an explanation. Ross also updated the TMT on cumulative juvenile steelhead passage numbers at Bonneville.

6. New System Operational Requests.

On July 3, the Corps received SOR 2001-8. This SOR, developed and supported by ODFW, USFWS, WDFW and NMFS, requests the following specific operations at Dworshak

Dam:

- Beginning July 9, continue releasing 10 Kcfs daily from Dworshak Dam, as long as the decision by the Federal Executive Group not to provide summer spill is in effect. Maintain temperature regulation at 48 degrees F.

Also on July 3, the Corps received SOR 2001-ODFW-01, developed and supported by ODFW. It requests the following specific operations:

- Beginning July 9 and continuing until at least August 31, release 10 Kcfs from Dworshak Dam, as long as the decision by the Federal Executive Group not to provide summer spill is in effect. Maintain temperature regulation at 48 degrees F.

Mallette spent a few minutes going through the contents of and justification for these SORs, the full text of which is available via the TMT homepage. She noted that SOR 2001-ODFW-01 differs from SOR 2001-9 in that it includes an ending date and minimum duration for the Dworshak operation.

Turner noted that, according to the most recent SSARR run, Dworshak would be at elevation 1525 feet on August 31 if discharge from the project is maintained at an average of 9.6 Kcfs through that date. Martin disagreed, saying that, according to his calculations, Dworshak would reach elevation 1520 several days in advance of August 31.

Why have you submitted two essentially identical SORs? Bettin asked. We wanted to ensure that, given the lack of summer spill this year, Dworshak flow augmentation will continue through at least August 31, Mallette replied. If the TMT adopts this SOR, does that mean it will consider no further Dworshak SORs? Greg Haller asked. No, it does not, was the reply.

From the Corps' standpoint, said Turner, we would be extremely reluctant to commit to a two-month operation of this type; our intent is to continue to describe two-week operations at TMT, and re-evaluate those operations as we continue through the summer season. Forester added that the Regional Executives considered the possibility of drafting Dworshak below elevation 1520 this year, as one way to mitigate for the lack of summer spill; it is my understanding that they have now asked the IT to take up that issue, he said.

What if some summer spill is provided? Bettin asked. We would consider that information as it comes up, and evaluate whether or not to revise our requested Dworshak operation, Mallette replied.

It sounds, then, as though the action agencies are unwilling to commit to anything beyond maintaining the 10 Kcfs discharge from Dworshak for the next two-week period, with the understanding that TMT will reconsider that operation during the next two weeks, Forester said. That's correct, said Henriksen – we do intend to implement SOR 2001-7 and SOR 2001-8, with the understanding that the action agencies are not committing to maintain 10 Kcfs outflow from Dworshak past the next two-week period.

I would add the caveat that we will attempt to maintain full powerhouse discharge from Dworshak (closer to 9.6 Kcfs) but that there may be some curtailment of Dworshak outflow if the West-of-Hatwai transmission system problems described earlier in today's meeting occur, Bettin said. It was pointed out that full powerhouse capacity will increase to 10.5 Kcfs at Dworshak as the reservoir level drops.

Mallette asked about a potential mechanism for notification if the West-of-Hatwai transmission system restriction occurs; Henriksen recommended that the TMT membership monitor the hourly operational information on the TMT homepage.

7. Recommended Operations.

Time period for the recommended operation is Monday 9 July through Sunday 22 July, Turner stated. The Dworshak operation was just described, said Turner; the plan is to ramp up to 7 Kcfs discharge on Thursday and to full powerhouse outflow on Saturday, to address the request in SOR 2001-8. Libby will hold 6 Kcfs; there will be no spill for fish passage, and the Grand Coulee reservoir will operate between elevations 1280 and 1282 ft., essentially passing inflow. It was agreed that Hungry Horse discharge will be reduced from 1 Kcfs to 500 cfs beginning this Saturday, when Dworshak discharge is increased to 10 Kcfs, which will reduce by about one-third the likelihood that Dworshak discharge will need to be curtailed due to the transmission system problem.

Ross noted that, during last week's IT conference call, he had provided some physiological information, from a recent peer-reviewed paper, on the water temperature at which optimum fall chinook growth occurs, in reference to the effects of cold-water releases from Dworshak on fall chinook growth in the Clearwater River. According to the authors of this paper, the temperature of optimum growth rate is approximately 16 degrees C, or 60-62 degrees F. The temperature in the mixed section of the Clearwater has fallen in recent days as Dworshak releases have increased, such that the ambient temperature in that system is now pretty close to optimal, said Ross.

8. Finalize Water Management Plan.

The most recent draft of the 2001 Water Management Plan, dated June 27, is now available on the TMT website; this draft incorporates NMFS' most recent comments, said Turner. He reviewed the changes made to this draft of the document. After a brief discussion, at Mallette's request, it was agreed that finalization of the 2001 Water Management Plan will be postponed to allow some additional time to review the Emergency Protocols section. Henriksen added that the Corps will read through the document one last time to clean up any typographical or textual errors. It was agreed that the TMT will attempt to finalize the 2001 WMP at next week's conference call.

9. Emergency Procedures.

Henriksen said the purpose of this agenda item is to check with the TMT to see who would like to be on the 2001 emergency notification list, to be contacted at home if an emergency situation occurs outside of business hours. Several TMT members provided phone numbers to Henriksen.

10. Next TMT Meeting Date.

The next meeting of the Technical Management Team was set for Wednesday, July 11 from 9 a.m. to noon at the Corps' Northwestern Division headquarters in the Custom House, Portland, Oregon. It was agreed that this will be a conference call, rather than a face-to-face meeting. Meeting notes prepared by Jeff Kuechle, BPA contractor.

TMT Attendance List

Name	**Affiliation**
Ruth Abney	COE
John Anasis	BPA
Scott Bettin	BPA
Dick Cassidy	COE
Billy Connor	USFWS
Richard Forester	Facilitation Team
Robin Harkless	Facilitation Team
Tim Heizenrater	ENRON
Cindy Henriksen	COE
Cathy Hlebechuk	COE
Ningjen Liu	IPC
Kyle Martin	CRITFC
Doug Marx	Attorney, Lake Pend Oreille Idaho Club
Pat McGrane	USBR
Mike O'Bryant	Columbia Basin Bulletin
Steve Pettit	IDFG
Dennis Rohr	D. Rohr & Associates

Chris Ross	NMFS
Mary Lou Soscia	EPA
Glen Traeger	AVISTA Energy
Rudd Turner	COE
Maria Van Houten	ENRON
Paul Wagner	NMFS
David Wills	USFWS
Rod Woodin	WDFW
John Yearsley	EPA